CHAPTER 3: AFFECTED ENVIRONMENT

This chapter describes the existing human, physical, and natural environments of the study area. These descriptions provide a baseline for assessing consequences from the Preferred and No Build alternatives in **Chapter 4**. As discussed previously, the study area includes the 3500 South corridor from Bangerter Highway to Redwood Road and 100 feet north and south from the centerline of 3500 South. Data previously collected for the 3500 South DEIS preparation were used to the extent possible for this chapter.

As part of the scoping and environmental analysis conducted for the project, the following environmental resources were considered. But since the project will not impact these resources, they are not discussed further in this document.

- Farmlands. The study area contains a small amount of dispersed agricultural land, accounting for less than 0.5% of total land area. The study area does not include any farmland protected under the Farmland Protection Policy Act (e.g. prime and unique farmlands, farmlands of statewide or local importance).
- Floodplains. The study area lies outside of designated flood plain areas and is designated as an "area of minimal flooding" by Federal Emergency Management Agency. The closest area between the limits of the 100-year and 500-year flood is the Jordan River flood plain, approximately 0.6 miles east of the intersection of 3500 South and Redwood Road. There are no flood plains in the immediate vicinity of the study area.
- Wild and Scenic Rivers. There are no eligible or designated Wild and Scenic Rivers in or near the study area.

3.1 LAND USE

This section describes the existing and future land use of the study area as described in city and county comprehensive plans, zoning designations, and neighborhood plans.

3.1.1 Current Land Use

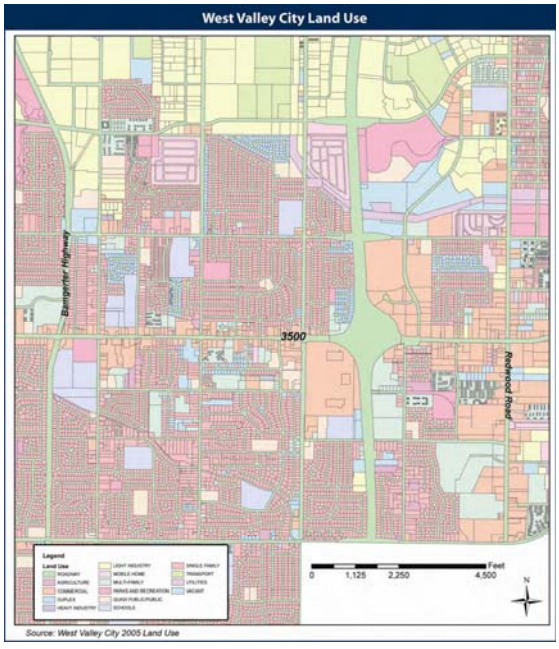
Land use categories and relative percentages within the study area are listed in **Table 3-1** and shown in **Figure 3-1**. Less than 1.4 percent of the land area is currently vacant.

Table 3-1 Existing Land Use

Land Use Category	% of Total in Study Area
Commercial	46.2%
Roadways	27.9%
Single-Family Residential	10.7%
Multi-Family Residential	7.0%
Parks and Recreation	2.3%
Schools	2.1%
Vacant	1.4%
Duplex	0.9%
Agricultural	0.4%
Quasi Public or Public	0.4%
Light Industrial	0.4%
Mobile Home	0.3%
Utilities	<0.1%
	100.00%

Source: West Valley City, 2005

Figure 3-1: Existing Land Use Map



About 46 percent of land use in the study area is commercial. Commercial development is concentrated at intersections with major north-south roadways and adjacent to the roadway because of the direct access provided by 3500 South. Buildings are typically oriented in a strip mall design with parking between the street and the front of the building. The commercial development along 3500 represents one of the primary commercial and retail areas of West Valley City. Valley Fair Mall, in the southeast quadrant of 3500 South and 2700 West, consists of a number of small commercial businesses. Valley Fair Mall is the largest commercial land use in the study area. Non-retail commercial land uses in the corridor are less common and include medical offices and small business offices.

Residential land use accounts for almost 19 percent of the land use in the study area. This includes single-family, multi-family, duplexes, and mobile homes. Residences are generally located behind the commercial parcels that front 3500 South. North-south arterials, collectors, and local roadways provide access from the corridor to these residences.

3.1.2 Current Zoning

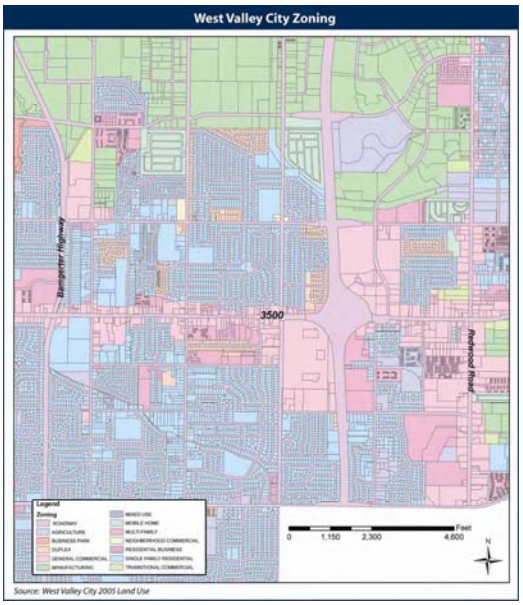
Current zoning in the study area is established by Salt Lake County Title 19 Zoning Ordinance and West Valley City Title 7 Zoning Ordinance. Zoning designations and relative percentages in the corridor are listed in **Table 3-2** and shown in **Figure 3-2**. They are generally consistent with the current land use patterns in the study area.

Table 3-2 Zoning

Zoning Category	% of Total in Study Area
General Commercial	48.4%
Roadways	27.9%
Single-Family Residential	13.7%
Multi-Family Residential	7.4%
Agriculture	1.8%
Duplex	0.8%
Transitional Commercial	<0.1%
Business Park	0%
Manufacturing	0%
Mixed Use	0%
Mobile Home	0%
Neighborhood Commercial	0%
Residential Business	0%
	100.0%

Source: West Valley City, 2005

Figure 3-2: Zoning Map



3.1.3 Future Land Use Planning and Development Trends

West Valley City and Salt Lake County guide the location and intensity of development through city master plans, development regulations, zoning ordinances, and subdivision regulations. The intent of these efforts is to guide development to ensure the overall vision of the city and community is followed. Several documents were reviewed:

- West Valley City General Plan: Vision 2020 - This plan identifies the city's issues, goals and actions related to economic development, urban design, neighborhoods, housing, parks, recreation, culture, environment, land use, transportation, and public facilities. It also includes two planning districts; 3500 South is within both the Granger and City Centre planning districts.
- City Centre Plan - This plan focuses on creating a recognizable city center with landmarks focusing on 3500 South, Constitution Boulevard, and Market Street. It includes a revitalized mall, an intermodal center, entrances from both directions along 3500 South, and a new mixed-use development in the Market Street area.
- Salt Lake County General Plan - This is a guide for development and general planning decisions.

Land use within the West Valley City portion of the 3500 South Corridor is likely to continue to develop in accordance with current zoning and the City's General Plan. The City Centre Plan has been formulated to facilitate redevelopment and establish a city center core for West Valley City in the area of I-215 to 3200 West and 3500 South. Some of the commercial nodes along the corridor have been identified to promote mixed-use development projects. These mixed-use locations are ideal to facilitate transit oriented development opportunities near future light rail or BRT stations.

3.2 SOCIAL

This section includes demographic information on housing characteristics, community facilities, population, race and ethnicity, age, income, and poverty level. 2000 Census block data was used in this section.

3.2.1 Housing Characteristics

The average household size in the study area is 3.16 persons, which is slightly higher than county and state averages (see **Table 3-3**). However, this is slightly lower than the West Valley City average household size of 3.36. The owner occupancy rate in the study area is 49 percent—substantially lower than the county average of 69.0 percent and city and state averages of 72.6 percent and 71.5 percent, respectively.

Table 3-3: Dwelling Unit Characteristics

	3500 South Study Area	West Valley City	Salt Lake County	State of Utah
Average Household Size	3.16	3.36	3.00	3.13
Housing Occupancy				
Occupied	95.7%	96.3%	94.9%	91.2%
Vacant	4.3%	3.7%	5.1%	8.8%
Housing Tenure				
Owner-Occupied	49.0%	72.6%	69.0%	71.5%
Renter-Occupied	51.0%	27.4%	31.0%	28.5%

Source: 2000 U.S. Census

3.2.2 Community Facilities

The community facilities available in the study area include one public park, two schools, and one place of worship. The locations of the community facilities are listed in **Table 3-4** and shown in **Figure 3-3**. Though just outside the study area, West Valley City Hall is located south of 3500 South on 3600 South Constitution Boulevard.

Table 3-4: Community Facilities

Facility	Location
Granger Park	3500 South 3650 West
West Lake Junior High School	3400 South 3450 West
Granger High School	3690 South 3600 West
Church of Jesus Christ of Later Day Saints	2842 West Lehman Avenue

Source: Carter & Burgess, 2006

Executive Order 13045, entitled "Protection of Children from Environmental Health Risks and Safety Risks," mandates that Federal agencies identify and assess environmental health and safety risks that may disproportionately affect children as a result of the implementation of Federal policies, programs, activities, and standards (62 Federal Register 19883-19888,

April 23, 1997). Currently, there are two schools and one park in the study area which could require children to cross streets.

3.2.2.1 Public Parks/Recreation

One West Valley City park is located within the study area. Granger Park is approximately 8.5 acres and is located on the south side of 3500 South at 3690 West. The park is operated by West Valley City. Granger Park includes soccer and volleyball areas, a fire pit, a 35-foot by 78-foot picnic pavilion, and a children's playground. Immediately south of the park is Granger High School. Some high school athletic activities such as girls' soccer are played in the park. Granger Park has approximately 620 feet of frontage along 3500 South. Both the park and the school share a paved parking lot accessible from 3600 West. A second parking lot specifically for park use is accessible from 3500 South.

3.2.2.2 Cultural and Entertainment Venues

The 'E' Center Arena is located within the study area, but it does not front on 3500 South. The 'E' Center is the home of the Utah Grizzlies international hockey team and the Utah Freezz world indoor soccer team. Within the 'E' Center is the unique Ford Theatre which can seat up to 12,000. The venue hosts both concerts and sporting events. The Hale Center Theater is adjacent to the 'E' Center and is a theater-in-the-round facility that seats up to 560 people. Several restaurants and the Hollywood Connection (a 15-screen movie theater/entertainment complex) surround the 'E' Center.

The Cultural Celebration Center is just east of Redwood along the Jordan River. This venue is a 74,000 square foot Arts and Heritage Hall which accommodates classes, exhibits, performances, and social gatherings. In addition, the facility includes an outdoor amphitheater with seating for 1,200 and a 15 acre festival grounds.

Figure 3-3: Community Facilities Map

3.2.3 Demographics

3.2.3.1 Population

As the MPO for the region, the WFRC maintains the projections for future year demographics and economic data. The WFRC uses information from the Governor's Office on Planning and Budget as a basis for projections. As shown in **Table 3-5**, the population of Salt Lake County is expected to increase by almost 60 percent between 2000 and 2030. The population in West Valley City is anticipated to grow by more than 29 percent in the next 25 years. This is substantially higher than the 1.9 percent population growth anticipated for the 3500 South study area. As stated previously, the study area is predominately commercial. Residential land use accounts for almost 19 percent of the corridor. The study area contains only 1.4 percent vacant land which would account for the low anticipated population growth given the limited development opportunities.

Table 3-5: Population Projections

Area	Year 2000	Year 2030	Increase	Percent Change
3500 South Study Area	2,258	2,301	43	1.9%
West Valley City	108,896	140,904	32,008	29.4%
Salt Lake County	898,387	1,431,843	533,456	59.4%

Sources: Census Bureau and WFRC

3.2.3.2 Race and Ethnicity

Table 3-6 summarizes race and ethnicity in the study area based on 2000 Census tract data relative to local, regional and statewide statistics. The study area has a lower percentage of Caucasian residents and a higher percentage of Hispanic residents than West Valley City. Otherwise, it is fairly consistent with the rest of West Valley City in its racial and ethnic makeup except for persons belonging to Some Other Race. West Valley City is more diverse than Salt Lake County in each category except Black or African American, and Salt Lake County is more diverse than the state average in each category except for Native American/Alaskan Native.

Table 3-6: Race & Ethnicity

Race/Ethnicity	3500 South Study Area	West Valley City	Salt Lake County	State of Utah
Caucasian	61.8%	70.3%	80.9%	85.3%
Hispanic	24.2%	18.5%	11.9%	9.0%
Black or African American	1.7%	1.1%	1.1%	0.8%
Native American or Alaskan Native	1.3%	1.2%	9.0%	1.3%
Asian	4.2%	4.3%	2.6%	1.7%
Native Hawaiian or Pacific Islander	4.2%	2.9%	1.2%	0.7%
Some Other Race	0%	8.7%	5.4%	4.2%
2 or More Races	2.6%	3.5%	2.6%	2.1%

Source: 2000 U.S. Census

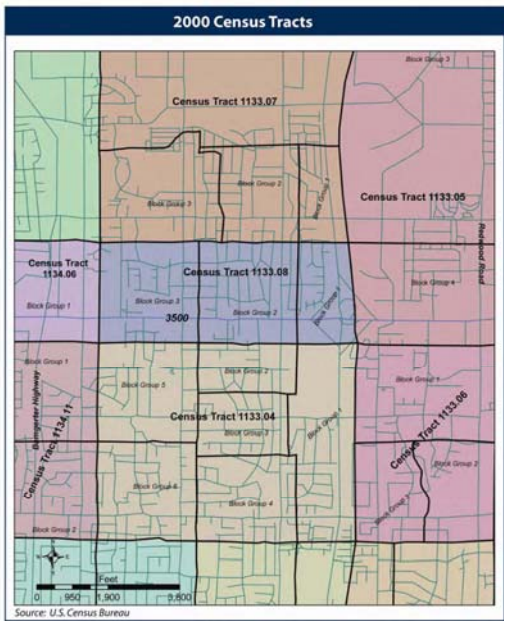
The composition of the study area relative to the individual block groups is similar, with the exception of one area with double the percentage of Asian persons present than in other areas. (See **Figure 3-4**).

Table 3-7: Study Area Demographics by Census Tract

Census Tract	Block Group	Population	White	Black or African American	Hispanic or Latino	Native American or Alaska Native	Asian	Native Hawaiian or Pacific Islander	Other
1133.05	4	1,212	70%	2%	22%	1%	3%	1%	1%
1133.08	1	1,241	55%	2%	25%	2%	3%	10%	3%
	2	1,685	67%	1%	22%	2%	2%	4%	2%
	3	1,853	58%	1%	26%	<1%	8%	3%	4%
1134.06	1	2,292	63%	1%	26%	1%	2%	3%	4%

Source: 2000 U.S. Census
*From total of age working population

Figure 3-4: Census Tracts and Block Groups Map



3.2.3.3 Age, Income, and Poverty Level

The median age of the population in the 3500 South study area is 26.7 years. As shown in **Table 3-8**, this is almost the same as the West Valley City median age of 26.8, but slightly lower than the county and state averages. Approximately 40.3 percent of residents in the study area are under 15 or older than 65. This is higher than the city, county, and state averages. This population represents non-drivers or infrequent drivers who tend to be more dependent on transit and carpooling for mobility.

Table 3-8: Age

	3500 South Corridor	West Valley City	Salt Lake County	State of Utah
Median Age (years)	26.7	26.8	28.9	27.1
Percent of Transit Dependent Age[1]	40.3%	33.8%	33.3%	35.1%

Source: 2000 Census
Note: [1] Less than or equal to under 15 or older than 65.

Table 3-9 and **Table 3-10**, show income and poverty level information. In addition to being slightly younger, West Valley City has a lower median income level than the county average, but is similar to the state average. The city also has a higher percentage of residents below the poverty level than the county, but a lower percentage than the state.

Table 3-9: Income, Poverty Level and LEP

	West Valley City	Salt Lake County	State of Utah
Median Household Income	$45,773	$48,373	$45,726
Percent Persons Below Poverty Level	8.6%	8.0%	9.4%
Limited English Proficiency (LEP)	5.6%	3.9%	2.6%

Source: 2000 Census

Table 3-10: Income, Poverty Level and LEP by Census Tract

Census Tract	Block Group	Population	% at Poverty Level*	Median Household Income	% Speak English "Not Well" or "Not at All"
1133.05	4	1,212	12%	$34,125	5%
1133.08	1	1,241	16%	$34,962	7%
	2	1,685	17%	$38,355	7%
	3	1,853	14%	$35,221	8%
1134.06	1	2,292	17%	$32,500	10%

Source: 2000 U.S. Census
*From total of age working population

3.2.3.4 Limited English Proficiency

Tables 3-9 and **3-10** provide information regarding the Limited English Proficiency (LEP) populations. Census block group data for "Ability To Speak English Not Well or Not at All" indicate that five to ten percent of the study area census block populations speak English "Not Well" or "Not At All." This is higher than city, county, and state averages. Of those persons who did not speak English well, Spanish was the preferred language.

3.3 ENVIRONMENTAL JUSTICE

This section includes information on Environmental Justice regulatory guidance, minority populations, and low-income populations. 2000 Census block data was used in this section.

Although not required for the project, UDOT has elected to follow the Environmental Justice Executive Order. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations, as signed into law on February 11, 1994, directs Federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of Federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Various other regulatory directives have been enacted that incorporate environmental justice principles into federally funded transportation programs. The intent of the regulatory guidance is to ensure that the principles of environmental justice are applied to transportation projects, and that the interests of, and impacts to, minorities and those typically underserved by the transportation infrastructure are recognized.

"Minority populations" are identifiable groups of minority persons living in a geographic proximity. Minority persons that fit this definition are those who are:

- Black - a person having origins in any of the black racial groups of Africa.
- Hispanic - a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.
- Asian - a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent.
- American Indian and Alaskan Native - a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition.

Environmental justice requirements for transportation projects also include consideration of the distribution of low-income populations in addition to minority populations.

3.3.1 Minority Populations

The 2000 Census survey included national origin and race as two separate questions. The minority population figures can include both origin and race; therefore, cumulative percentages may exceed 100 percent. Respondents could select both national origin as well as racial category (e.g., Hispanic and African-American, or Hispanic and White), or more than one race. Minority populations should be identified where either: (a) the minority population of the affected area exceeds 50 percent; or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. A minority population also is present if the minority percentage, as calculated by aggregating all minority persons (albeit from different groups), meets one of the previously mentioned thresholds.

Table 3-7 shows the ethnicity and income characteristics of the persons living in Block Groups that are within the 3500 South study area. Of the five census block groups within the study area, none had a minority population in excess of 50 percent, but all five block groups had a substantially higher percentage of minority population when compared to the county and state averages. Therefore, the study area contains minority communities.

3.3.2 Low-Income Populations

Low-income populations are defined as those households with income levels at or below the Department of Health and Human Services poverty guidelines. In 2000, the weighted average threshold was $8,794 for one person and $17,603 for a family of four (*Poverty in the U.S.,* U.S. Census Bureau, 2000). None of the census block groups had a median household income below the U.S. Department of Health and Human Services 2005 Poverty Guidelines of $17,603, as shown in **Table 3-10**. However, the percentages of low-income persons at or below the poverty level for each block group exceeded state and local averages, as shown in **Tables 3-9** and **3-10**. The census data indicate that locations of these low-income households are fairly dispersed and, therefore, the study area does not appear to contain localized populations of low-income households.

3.4 ECONOMICS

This section presents economic data for the study area in terms of labor, employment, and sales tax revenue.

3.4.1 Labor

According to the 2000 Census, there are 55,000 residents of West Valley City in the labor force. This compares with 658,000 in the labor force in Salt Lake County, making West Valley City about eight percent of the county's labor force. The Census also showed that county-wide, the labor force has grown 55 percent since 1990. When compared to the labor force, West Valley City has slightly more jobs than people, whereas Salt Lake County has slightly more people than jobs. The unemployment rate is also declining in Salt Lake County, as it is beginning to stabilize since the rapid growth and decline associated with the temporary Salt Lake Winter Olympics jobs in 2002. At the end of 2002, the unemployment rate was at six percent, but it is at three percent now. Employment by type is depicted in **Table 3-11**.

Table 3-11: Employment in West Valley City and Salt Lake County

	Total	Service	Production	Retail
West Valley City	51,000	9,300 18%	7,500 15%	5,200 10%
Salt Lake County	564,000	85,000 15%	85,000 15%	120,000 21%

Source: City of West Valley Economic Development Department and Utah Department of Workforce Services

3.4.2 Retail Sales Tax Revenues

The 3500 South Corridor is a large economic generator for West Valley City as it is the major commercial corridor within the city. Sales tax revenues are generally increasing within Salt Lake County, as shown in **Table 3-12**. It indicates that there has been a recent upswing in sales activity in both West Valley City and Salt Lake County.

Table 3-12: Sales Tax Revenues

	2000	2001	2002	2003	2004
West Valley City (in $ millions)	N/A	$15.2	$17.0	$14.5	$15.3
Salt Lake County (in $ millions)	$15.9	$15.8	$15.7	$15. 4	$16.5

Source: City of West Valley Economic Development Department and Utah Department of Workforce Services

3.4.3 Retail/Commercial Areas

3500 South is the major commercial corridor within West Valley City, with a high concentration of businesses and services from Bangerter Highway to 2700 West. The businesses vary by sector, but include both locally and nationally owned shops and services that are typical to an urban corridor: banks, grocery stores, restaurants, automobile service centers, gas stations, and other retail stores.

3.4.4 Redevelopment Projects

As mentioned in **Section 3.1,** land use within the 3500 South Corridor is likely to continue to develop in accordance with current zoning and the city's General Plan. The city has a strong economic development program and is encouraging development in a number of areas near or adjacent to 3500 South.

3.4.4.1 New City Center

Located around Valley Fair Mall at 2700 West and 3500 South, West Valley City has envisioned the development of a new City Center. The vision for the City Center was adopted in 2004 with no build-out date specified. The city will leverage the public investment made into transit at the Intermodal Center to accomplish the following goals:

- Complimentary mixed land uses (i.e., residential, office, retail, and entertainment).
- Add 1,500 dwellings with a variety of housing types and prices to help support the City Center retail district.
- Link higher density projects in the surrounding area to the Intermodal Center with a circulating bus.
- Create a new mixed use urban center including a combination of 750,000 square feet of new office and retail.
- Revitalize the declining Valley Fair Mall and create a regional shopping district for residents of West Valley and neighboring communities.

3.4.4.2 3500 South "A" Redevelopment Project

This 64-acre project is located east of the intersection of 3500 South and Redwood Road. The south sector of the project area has been redeveloped into a shopping center anchored by a major grocery store. The north sector, approximately 15 acres, includes a mixture of older structures, several small, new building, and a large amount of vacant land. Developers are currently being sought to invest in redevelopment.

3.4.4.3 Market Street Redevelopment Project

The 21-acre Market Street project was formed in 1987 to improve commercial opportunities at the intersection of 3500 South and 2700 West. The project is located north of West Valley City Hall and west of the Valley Fair Mall. The project includes a three-story office building with small commercial shops on the first level. Businesses include a major toy store, and a mixture of banks and restaurants. This project has potential for additional development including high density uses.

3.4.4.4 Willow Wood Redevelopment Project

The 31 acre Willow Wood Project is located east of Granger High School and Granger Park on 3600 West and 3500 South. Most of the original parcels were irregular or narrow and therefore vacant, with development only on the major streets. The site now includes a grocery store, restaurants, automobile service facilities, and other retail stores. There is also a 104-unit senior citizen housing complex on site. Additional redevelopment opportunities are limited.

3.5 PEDESTRIANS AND BICYCLES

As discussed in **Section 1.2.1**, sidewalks are generally in place on both sides of 3500 South from Bangerter Highway to Redwood Road; however, they are discontinuous and some are in poor condition. Additionally, there are sections of 3500 South that are bordered by sidewalks without adequate setback distances. The sidewalks have occasional obstructions such as telephone poles and trash receptacles in the pedestrian pathway and Americans with Disabilities (ADA) ramps are not provided at all intersections.

There are marked crosswalks at 3600 West, 3450 West, 3200 West, Market Street, 2700 West, 2200 West, 1940 West, and Redwood Road. To support crosswalks, traffic signals in the corridor are equipped with pedestrian push buttons and/or pedestrian signal-heads. Currently, no mid-block crossings are provided. Because of the predominately commercial nature of the corridor, numerous driveways are located along 3500 South. In some cases, the commercial properties have no distinguishable driveway with access to 3500 South running the majority of the property. This allows vehicles to cross pedestrian paths with no predictability or regulation and is a concern for pedestrian safety.

The 3500 South Corridor is an active transit corridor with transit patrons walking or biking to and from bus stops. UTA Bus Route 37 provides the primary service along 3500 South and the corridor also includes a transfer point adjacent to Valley Fair Mall near 2700 West where 18 bus routes converge. A proposed intermodal hub is planned in the vicinity of this transfer point and an east-west spur from the current TRAX light rail system is planned to cross 3500 South at 2700 West. As noted in **Section 3.2.4.3**, the study area already has a higher percentage of the population that are non-drivers or infrequent drivers who tend to be more dependent on transit and car-pooling for mobility.

3500 South does not have formal, designated bicycle lanes. Currently, bicyclists use the sidewalks or shoulders but are often forced to ride in traffic for certain portions of their trips. West Valley City is planning several north-south bicycle facilities along 3600 West, 3200 West, 2700 West, and Decker Lake Drive that will cross 3500 South.

3.6 AIR

3.6.1 Regulatory Setting

The Clean Air Act requires that the EPA set National Ambient Air Quality Standards (NAAQS) for pollutants that are considered harmful to public health and the environment. These pollutants, including carbon monoxide (CO), nitrogen dioxide (NO_2), ozone, lead, particulate matter smaller than ten microns (PM_{10}), particulate matter smaller than 2.5 microns ($PM_{2.5}$), and sulfur dioxide (SO_2), are shown in **Table 3-13**. Primary standards are set to protect human health and secondary standards are set to protect welfare and the environment. Transportation projects typically require the evaluation of pollutants associated with automobile sources such as CO, ozone (due to the reactivity of Volatile Organic Compounds (VOC), and nitrous oxides (NO_x)), PM_{10}, and $PM_{2.5}$. The Utah Division of Air Quality (DAQ) has adopted necessary measures to attain and maintain the NAAQS. These measures are enforced through the Utah Air Conservation Rules and the State Implementation Plan (SIP).

Table 3-13. National Ambient Air Quality Standards

Pollutant	Standard Value	Standard Type
Carbon Monoxide		
8-hour Average	9 ppm (10 mg/m^3)	Primary
1-hour Average	35 ppm (40 mg/m^3)	Primary
Nitrogen Dioxide		
Annual Arithmetic Mean	0.053 ppm (100 µg/m^3)	Primary and Secondary
Ozone		
8-hour Average	0.08 ppm (157 µg/m^3)	Primary and Secondary
Lead		
Quarterly Average	1.5 µg/m^3	Primary and Secondary
PM_{10}		
Annual Arithmetic Mean	50 µg/m^3	Primary and Secondary
24-hour Average	150 µg/m^3	Primary and Secondary
$PM_{2.5}$		
Annual Arithmetic Mean	15 µg/m^3	Primary and Secondary
24-hour Average	65 µg/m^3	Primary and Secondary
Sulfur Dioxide		
Annual Arithmetic Mean	0.03 ppm (80 µg/m^3)	Primary
24-hour Average	0.14 ppm (365 µg/m^3)	Primary
3-hour Average	0.50 ppm (1300 µg/m^3)	Secondary

Source: (OAQPS, 2005)
µg/m^3 = Micrograms per cubic meter.
mg/m^3 = Milligrams per cubic meter.
ppm = Parts per million.

The study area is located in Salt Lake County, which is designated by the EPA as a maintenance area for ozone, a non-attainment area for PM_{10} and sulfur oxides, and an attainment area for all other NAAQS. A non-attainment area is an area that meets neither the national primary nor secondary NAAQS for one or more of the subject pollutant(s). An attainment area is any area that meets the national primary or secondary ambient NAAQS standards. A NAAQS maintenance area is an area that has been designated as non-attainment, and seeks reclassification as attainment. This process requires establishing a plan to ensure compliance to NAAQS standards and a trial period which may extend to 20 years. **Table 3-14** shows the attainment status for vehicle-related pollutants in Salt Lake County.

Table 3-14: Attainment Status for Vehicular-Related Pollutants

Location	Pollutant	Attainment Status
Salt Lake County	Ozone	Maintenance
Salt Lake County	PM_{10}	Non-attainment
Salt Lake County	Carbon Monoxide	Attainment (except for Salt Lake City which is a Maintenance Area)

The Transportation Equity Act and the Clean Air Act require that transportation projects located within non-attainment or maintenance areas for one or more vehicle related pollutants (CO, PM, and ozone) demonstrate conformity between transportation plans and SIPs. A conforming transportation plan is one that has been analyzed for emissions of controlled air pollutants and found to satisfy the emission level limits established in the SIP. The WFRC is responsible for documenting transportation plans for all of Salt Lake County in the Wasatch Front LRP and the Wasatch Front Region Transportation Improvement Plan (TIP). In January 2004, the WFRC determined that the 2004-2030 LRP and the 2004-2008 TIP conform to the SIP for all pollutants.

In addition to the regional conformity analysis, projects located within CO and PM_{10} non-attainment areas are required to prepare a "hot spot" analysis of emissions. The analyses should demonstrate that the project would not cause or contribute to any new localized CO or PM_{10} violations, or increase the frequency or severity of any existing violations. The dispersion models currently recognized by the EPA for CO are the California Line Source Dispersion Model and the California Intersection/Line Source Dispersion Model (CAL3QHC). A modeled CO analysis considers selected intersections for the Transit Build alternative, including the No Build Alternative. CAL3QHC was used to analyze appropriate intersections along the proposed corridor. The quantitative analysis will also factor in the background CO concentrations (see **Section 4.7.5**). Currently, the EPA has not released modeling guidance to perform a quantitative PM_{10} "hot spot" analysis; therefore, a PM10 conformity demonstration must be based on a qualitative consideration of local factors. $PM_{2.5}$ is a subset of PM_{10}; as such, the qualitative analysis of PM_{10} also includes $PM_{2.5}$. The 3500 South Air Quality Report (**Appendix I, under separate cover**) details the analysis, including the traffic data used.

The highest levels of PM_{10} and CO normally occur along the Wasatch Front during winter months. PM_{10} levels may exceed the NAAQS when the air is stagnant, snow is on the ground, and temperatures are low. Cold winters, the surrounding mountains, and the proximity of the Great Salt Lake create the conditions for wintertime inversions in the area. (Inversions can occur when air temperature rises with increasing altitude, holding surface air down and preventing dispersion of pollutants). The Utah DAQ maintains a network of air quality monitoring stations throughout the Wasatch Front. The West Valley (3100 South

3275 West) and Magna (2935 South 8560 West) air quality monitors are located near the study area. The West Valley monitor measures CO, ozone, and $PM_{2.5}$; the Magna monitor measures PM_{10}, lead, and SO2.

3.6.2 Mobile Source Air Toxics

In addition to the NAAQS, EPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (such has heavy duty construction equipment), area sources (such as gas stations), and stationary sources (such as industrial operations). Mobile Source Air Toxics (MSATs) are compounds emitted from highway vehicles and non-road equipment and their fuels which are known to cause cancer or other serious health and environmental effects (www.epa.gov/otaq/htm).

The Clean Air Act does not include a specific list of MSATs, unlike the list of 188 air toxics given for stationary sources. Motor vehicles emit several pollutants that EPA classifies as known or probable human carcinogens including benzene, formaldehyde, acetaldehyde, 1,3-butadiene, and diesel particulate matter (EPA400-F-92-004, August 1994). EPA also considers acrolein, whose potential carcinogenicity has not been determined (Draft Revised Guidelines for Carcinogen Risk Assessment, EPA, 1999), a priority MSAT. EPA issued a Final Rule on Controlling Emissions of Hazardous Air Pollutants from Mobile Sources on March 29, 2001 (66 FR 17229). To date, neither NAAQS for MSATs, nor national project level guidelines or guidance to study MSATs under various climatic and geographic situations have been developed. Such limitations make the study of MSAT concentrations, exposures, and health impacts difficult and uncertain. Thus, accurate and reliable estimates of actual human health or environmental impacts from transportation projects and mobile source air toxics are not scientifically possible at this time.

3.7 NOISE

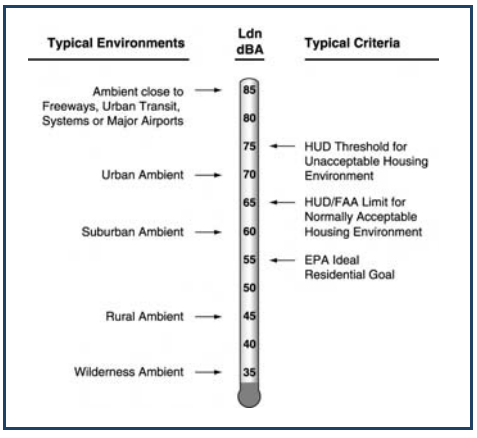
3.7.1 Traffic Noise

Traffic noise can potentially impact the daily activities and quality of life for people living near streets and highways. Traffic noise levels depend on traffic volume, traffic speed, and the type of traffic. Vehicle noise is produced by the engine, exhaust, and tires. Factors such as vegetation, terrain, and obstacles can also affect the level of traffic noise. Typically, traffic noise is not a problem for people living more than 500 feet from heavily traveled freeways or more than 100 to 200 feet from lightly traveled roads (FHWA 2003).

All sound level measurements and estimates in this SES are reported as Leq(h) in units of decibel (dB) and are A-weighted. The Leq (equivalent steady state sound level) describes the receiver's average noise exposure from all events over a given period of time. Leq(h) is the hourly value of Leq. The "A" indicates that the sound has been filtered to reduce the strength of very low and very high frequency sounds, much as the human ear would hear. On the average, each A-weighted sound level increase of 10 dB corresponds to an approximate doubling of subjective loudness.

An example of typical ambient noise levels in the environment is shown in **Figure 3-5**. The unit of measurement, Ldn, represents the A-weighted Leq for a 24-hour period with an added 10 decibel penalty for noise that occurs between 10 pm and 7 am.

Figure 3-5 Examples of Typical Outdoor Noise Exposure



Reference: HMMH, 1995

UDOT considers noise impacts based on FHWA Noise Abatement Criteria (NAC) (23CFR772). FHWA requires all states to define at what value a predicted noise level approaches the NAC defined in 23 CFR 772 and, thus, results in a noise impact (FHWA 1995). UDOT has defined "approach" as 2 decibels (dBA) less than the FHWA NAC for use in identifying traffic noise impacts in traffic noise analyses. The UDOT NAC are shown in **Table 3-15**.

Table 3-15: UDOT Noise Abatement Criteria

Category	Leq - dB(A)*	Description of Activity Category
A	55 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve the intended purpose
B	65 (Exterior)	Picnic areas, recreational areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, hospitals
C	70 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above
D	None	Undeveloped lands
E	50 (Interior)	Residences, hotels, motels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums

Source: UDOT, 2004 *Hourly A-weighted sound level, reflecting a 2dBA approach value below 23CFR772

Two types of noise levels occurring at sensitive land use areas (residences, businesses, schools, parks, etc.) are considered impacts under the UDOT criteria (UDOT, 2004):

- (1) The design noise level is greater than or equal to the UDOT NAC shown in **Table 4-21** for the respective activity category.
- (2) The design noise level is greater than or equal to an increase of 10 dBA over the existing noise level, regardless of the existing noise value.

Therefore, if traffic noise modeling predicts a noise level equal to the values shown in the following table, or a noise level greater than 10 dBA over existing levels, some sort of

abatement must be considered for the project in the appropriate locations. Some locations, however, may not be feasible or reasonable for abatement.

UDOT considers a severe traffic noise impact to be an increase of 30 dBA or more over existing residential noise levels, or a predicted absolute noise level of 80 dBA or more (UDOT 2004).

The majority of the study area includes residential (Activity Category B) and commercial (Activity Category C) land uses. Parks, recreation areas, places of worship, hotels, motels, hospitals, schools, and libraries are included in Category B.

Existing ambient noise levels in the study area were determined by direct measurements at various locations in residential or commercial areas. Short-term measurements were taken at the selected sites near a building (or a proposed building development) to represent areas of frequent human activity.

Eight measurements were taken in the study area. The measurements were recorded on mild, calm weekdays using a Quest Technologies 2900 integrating and logging sound level meter. Prior to taking the measurements, the meter was calibrated using a Quest Technologies QC-10 sound calibrator. Relevant data, such as traffic volumes, vehicle types, and traffic speeds, were collected for verification of FHWA's Traffic Noise Model (TNM). The existing noise measurements are shown in **Table 3-16**.

Table 3-16. Existing Ambient Noise Measurements

Address	Existing Leq(h), dBA*
8265 West Oquirrh Lane	66.8
7720 West Montclair	70.0
Hunter Park	62.7
Granger Community Park	61.4
4240 West	62.8
4949 West	67.4
6230 West 3540 South	55.9
6829 West	58.6

* dBA = A-weighted decibel level

3.8 WATER RESOURCES AND WATER QUALITY

Water resources include both surface water bodies and watercourses such as lakes, ponds, rivers, streams, canals, as well as underground aquifers. **Figure 3-6** illustrates the water bodies in the vicinity of the 3500 South project study area.

3.8.1 Lakes and Ponds

There are no lakes or ponds within the study area.

The closest surface water body to 3500 South is Decker Lake, located approximately 0.9 miles to the north of 3500 South along I-215. According to the United States Geological Survey (USGS), the primary inflow to the lake is urban runoff. In April 1998, the depth of the water in the lake was determined to be three feet during a sediment sample test by the USGS. . From the sediment sample, the following compounds were measured: organochlorine pesticides, polychlorinated byphenols, polycyclic aromatic hydrocarbons, metals, ^{137}cesium, and ^{210}lead (USGS, 2001).

Other small ponds and intermittent water bodies are close to the study area, including recreational golf course ponds and small ponds in the flood plain of the Jordan River. These small water bodies are located less than a mile north and east of the study area.

3.8.2 Rivers

There are no rivers within the study area.

The Jordan River is located approximately 0.9 mile east of the intersection of 3500 South and Redwood Road. It meanders for approximately 58 river miles from the outlet of Utah Lake northward to the Great Salt Lake. Each of the Jordan's seven major tributaries (Little Cottonwood Creek, Big Cottonwood Creek, Mill Creek, Parley's Creek, Emigration Creek, Red Butte Creek and City Creek) originates in the Wasatch Mountains and flows westward to the Jordan River. No major streams originate from the western side of the valley (Department of Environmental Quality, 2001).

Figure 3-6: Water Resources

3.8.3 Irrigation Canals

Three primary canals are located outside the project area: the North Jordan Canal, the Riter Canal, and the Ridgeland Canal.

The North Jordan Canal was constructed in 1872 to increase water supply west of the Jordan River. The North Jordan Canal diversion, located on the west side of the Jordan River about 10 miles downstream from the present Turner Dam, was constructed at a capacity of 120 cubic feet per second. Throughout the study corridor, the North Jordan Canal is piped underground with a flow of approximately 40 cubic feet per second in the area of 3500 South. The top of the canal piping is approximately 36 to 40 inches below the road surface within the study area.

Water in the canal runs all year, with the exception of two weeks for maintenance. Canal water is used solely by Kennecott Utah Copper during the winter months. The remainder of the year, the canal water is used for irrigation, in addition to its use by Kennecott. It is also used, as needed, by Salt Lake County for flood control measures. Under the 1992 Utah Lake Water Distribution Management Plan, the primary storage rights of various parties, including the North Jordan Irrigation Company, were protected. The North Jordan Canal Company has primary storage rights of 5,350 acre-feet (Hooton, 1993 and Hooton, 1999).

There are two laterals, or branches, off of the North Jordan Canal within the study area; the 3200 West lateral that joins the Decker Lake storm drain system to the north via the Kern Chesterfield Storm Drain and the 3600 West lateral that eventually joins the Riter Canal which proceeds west to the Kennecott Drain. The canal segment that crosses 3500 South and continues northward is part of a storm drain system for Salt Lake County and West Valley City.

All North Jordan Canal laterals cross beneath the 3500 South road surface. Stockholders own and operate the laterals. The North Jordan Irrigation Company maintains the North Jordan Canal. The laterals are used primarily by residents in the area for irrigation purposes with the exception of Kennecott. The western extent of the North Jordan Canal eventually flows into the Riter Canal at a point approximately 700 feet northwest of the 3500 South and 4800 West intersection. This connection allows water from the North Jordan Canal to be delivered through the Riter Canal to Kennecott for use in materials processing.

The Ridgeland Canal, which extends from the North Jordan Canal at approximately 3200 West and 3800 South, is completely piped within the study area. The Brighton Irrigation Company owns, and does all maintenance on, the Ridgeland Canal. Currently, water is not being run through the canal and it is considered abandoned.

3.8.4 Aquifers

Groundwater in the Salt Lake Valley flows in Late Tertiary and Quaternary alluvial and lacustrine basin fill deposits. These deposits range from coarse gravel to clay; the gravel deposits tend to occur near the mountain fronts, whereas the clay deposits tend to occur closer to the middle of the valley. The valley contains three main aquifers: a deep unconfined aquifer along the mountain fronts, a deep confined aquifer in the center of the valley, and a shallow unconfined aquifer in the center of the valley (Lund et al., 1990). Near the middle of the valley the shallow unconfined and the deep confined aquifers are distinct. Along the edge of the valley in the recharge area, the shallow unconfined and deep confined aquifers merge into one deep unconfined aquifer. Groundwater used for drinking water is taken almost entirely from this deeper confined aquifer because the water quality of the shallow aquifer is not as good. Depth to water in the unconfined shallow aquifer ranges from 0 to 40 feet below ground surface (Seiler and Waddell, 1984). Below the shallow aquifer is an impermeable clay layer approximately 40 to 100 feet thick, with the top located about 50 to 150 feet below the ground surface (Hely et al., 1971). Below the clay layer is the deep confined aquifer. Because the deep aquifer is separated from the shallow aquifer by an impermeable clay layer, activities at the surface in this area would most likely not impact the water quality of the deep aquifer.

Groundwater in Salt Lake Valley generally moves from recharge areas at high altitudes, along the foothills of the mountains, to discharge areas at lower altitudes, like the Jordan River. A groundwater divide formed by the Jordan River separates the Salt Lake Valley into two different groundwater regimes. Groundwater originating along the eastern benches, flows west towards the Jordan River, while groundwater originating along the western benches flows east towards the Jordan River. The inferred direction of the groundwater flow on the west side of the Jordan River is to the northeast.

3.8.5 Water Diversions

According to the Utah Division of Water Rights, 2006, there are an estimated 45 water rights within 100 feet of the 3500 South center-line between Bangerter Highway and Redwood Road. Of these 45 water rights, 29 have been unapproved, disallowed, or terminated. The 16 remaining water rights are underground water wells and five of these wells are located on the west segment of 3500 South where construction will take place (see **Appendix B**). Of the 5 underground water wells three are listed for irrigation use and two are listed for domestic and irrigation use. Although some of these wells may no longer be in use, the water rights are still considered to be valid and in effect until determined otherwise (see **Section 4.10.3**).

3.8.6 Water Quality

The Utah Department of Environmental Quality (UDEQ) has set water quality standards for waters of the state, "to protect, maintain and improve the quality thereof for public water supplies, for the propagation of wildlife, fish and aquatic life, and for domestic, agricultural, industrial, recreational and other legitimate beneficial uses" (R317-2). Waters of the state have been classified according to beneficial uses. The water quality standards for each class are listed in (R317-2-14). In addition, each state is required by Section 303(d) of the Clean Water Act (CWA) to identify waters such as lakes, reservoirs, rivers, and streams that do not currently meet, or are expected not to meet, water quality standards.

The Riter Canal is protected for agricultural use (Class 4). Water from the Riter Canal is used for processing by Kennecott year-round. During non-winter months it is also used for irrigation.

Decker Lake is protected for secondary contact recreation, warm water aquatic wildlife, waterfowl, and agricultural use (Class 2B, 3B, 3D, and 4).

The segment of the Jordan River near the project area is protected for secondary contact recreation, warm water aquatic wildlife, and agricultural use (Class 2B, 3B, and 4).

Decker Lake and the segment of the Jordan River that receive surface runoff from the project area are not included on the Utah 2004 EPA Section 303(d) list of impaired waters (UDEQ, 2004). These waters meet water quality standards.

3.9 WETLANDS

Wetlands are defined by the United States Corp of Engineers (USACE) and the EPA based on the presence of wetland vegetation, wetland hydrology, and hydric soils. Many wetlands and other aquatic features are considered waters of the US by the USACE, and these "jurisdictional" areas are protected under Section 404 of the CWA. The CWA requires that the USACE issue a permit for any discharge of dredged or fill material into such waters.

The study area for the assessment of the natural environment was 100 feet on each side of the 3500 South centerline. This 200-foot-wide area was walked and/or driven to identify wetlands and other waters. Wetlands were identified by the presence of wetland vegetation, evidence of wetland hydrology, and assuming the presence of hydric soils. Based on a site visit conducted by the USACE on October 22, 2002, and the subsequent letter dated October 28, 2002 (**see Appendix A**), none of the wetlands identified outside the (200-foot-wide) study area are considered jurisdictional under Section 404 of the CWA.

3.10 THREATENED & ENDANGERED SPECIES

Threatened and endangered species includes those that are candidates for, proposed as, or listed as, threatened, endangered, or of special concern by the United States Fish and Wildlife Service (USFWS) and/or the Utah Division of Wildlife Resources (UDWR).

Although this section describes all of the state and federally listed species potentially occurring within or near the project area, only those species listed as federally threatened or endangered are formally protected under the Endangered Species Act of 1973 (as amended).

The USFWS and UDWR were contacted to obtain a list of the state and federally-listed species that could occur within the study area. Each of these species is discussed in the following sections. The UDWR list of species is posted on their website (UDWR, 1998).

3.10.1 Threatened & Endangered Plant Species

The USFWS identified two federally-listed plant species as potentially occurring in Salt Lake County within the study area:

- Ute ladies' tresses orchid (Spiranthes diluvialis)
- Slender moonwort (Botrychium lineare)

Ute Ladies' Tresses Orchid - Federally-listed threatened species. It is 8 to 20 inches tall with 3 to 15 small white or ivory colored flowers clustered at the top of the stem. It is found in wet meadows, stream banks, abandoned oxbow meanders, marshes and raised bogs at 4,500 to 6,800 feet above sea level. The orchid generally occurs in areas where the vegetation is relatively open, but not over-grazed. The plant is unlikely to occur in the study area since it is below the known elevation range of the plant, soils are highly alkaline (salt deposits on the ground surface), and the vegetation is mostly disturbed and overgrown.

Slender Moonwort - Federally-listed candidate species. It is found on grassy slopes and among medium-height grasses along edges of stream side forests. The plant typically occurs between 7,900 and 9,500 feet above sea level. The study area is well below the known elevation range of slender moonwort and no areas of suitable habitat exist.

3.10.2 Threatened & Endangered Fish & Wildlife Species

The USFWS identified four federally-listed fish and wildlife species as potentially occurring in Salt Lake County within the study area:

- June sucker (Chasmistes liorus)
- Bald eagle (Haliaeetus leucocephalus)
- Western yellow-billed cuckoo (Coccyzus americanus occidentalis)
- Canada lynx (Lynx canadensis).

June Sucker - Federally-listed endangered species. It is native to Utah Lake and the mouth of the Provo River, where the only naturally occurring population is found. No suitable habitat for the June Sucker exists within the study area.

Bald Eagle - Federally-listed threatened species. Bald eagles typically nest near rivers, lakes, or reservoirs, in areas away from human disturbance. Although wintering bald eagles

may occasionally forage in or near the study area, there is no habitat available that would attract nesting or a substantial number of bald eagles. Therefore, occurrence of the bald eagle is unlikely.

Western Yellow-Billed Cuckoo - Federally-listed candidate species. This species breeds primarily in large riparian areas, especially cottonwood and willow habitats along large rivers. The occurrence of the western yellow-billed cuckoo is highly unlikely since no areas of suitable habitat exist.

Canada Lynx - Federally-listed threatened species. The Canada Lynx prefers extensive tracts of dense forest with bogs, rocky outcrops, and thickets. The study area occurs well outside the known range of the Canada lynx and no suitable habitat exists.

3.10.2.1 Other Species of Concern

Eight species could occur within the project area (based on general location and habitat) that are listed by the UDWR and/or the Utah Natural Heritage Program as species of special concern or as species vulnerable to extermination. The eight species are:

- Bonneville cutthroat trout (Oncorhynchus clarki utah)
- Spotted frog (Rana luteiventris)
- Ferruginous hawk (Buteo regalis)
- Swainson's hawk (Buteo swainsoni)
- Common yellowthroat (Geothlypus trichas)
- American white pelican (Pelecanus erythrorhynchos)
- Long-billed curlew (Numenius americanus)
- Short-eared owl (Asio flammenus)

The probability of these species occurring in the study area is very low due to the lack of suitable habitats and the extensive development and disturbance.

3.11 VEGETATION & WILDLIFE

A study area of 100 feet on both sides of the centerline of 3500 South was established for the study of the existing vegetation and wildlife. The entire 200-foot-wide study area was walked and/or driven to identify vegetation communities and dominant vegetation. Three ecological communities were identified: disturbed soils, wetlands, and urban forest. Since only the disturbed community has the potential to be affected, the wetland and urban forest communities are not discussed.

3.11.1 Disturbed Community

Any area disturbed from its natural state by human intervention is categorized as a disturbed community. This type of vegetation community is characterized by large areas of exposed soil with patches of mostly weedy vegetation or landscaped areas. This includes all areas of human development (i.e., roads, parking lots, houses, etc.) and all areas of unnatural vegetation (i.e., agricultural areas, landscaping, and bare soil on the side of the road and in vacant lots). The dominant plant species are listed in **Table 3-17** and are located in the study area.

Table 3-17: Disturbed Community Dominant Species

Common Name	Latin Name
Trees & Shrubs	
Russian Olive	*Elaeagnus angustifolia*
Siberian Elm	*Ulmus pumila*
Tree of Heaven	*Ailanthus glandulosa*
Forbs & Graminoids	
Prostrate Knotweed	*Polygonum aviculare*
Kentucky Bluegrass	*Poa pratensis*
Green Foxtail (Bottle grass)	*Setaria viridis*
Chicory	*Cichorium intybus*
Western Wheatgrass	*Agropyron smithii*
Lambs Quarters	*Chenopodium album*
Orchard Grass	*Dactylis glomerata*
Whitetop	*Cardaria draba*
Cheatgrass	*Bromus tectorum*
Scotch Thistle	*Onopordon acanthium*
Common Sunflower	*Helianthus annuus*
Prickly Lettuce	*Lactuca serriola*
Smooth Brome	*Bromus inermis*

Source of nomenclature: A Utah Flora, Welsh, S.L., Atwood, N.D., Goodrich, S., Higgins, L.C. 1993

In addition to the dominant species, other species identified in the disturbed community include common plantain (Plantago major), clover (Trifolium sp.), field bindweed (Convolvulus arvensis), yellow sweet clover (Melilotus officinalis), dogbane (Apocynum cannabinum), curly dock (Rumex crispus), common mallow (Malva neglecta), western salsify (Tragopogon dubius), alfalfa (Medicago sativa), teasel (Dipsacus fullonum), Virginia creeper (Parthenocissus quinquefolia), showy milkweed (Asclepias speciosa), and dandelion (Taraxacum officinale).

Residential and commercial development has created most of the area now considered the disturbed community. Many of these activities have left large expanses of bare soil, creating an ideal environment for weed invasions. Weeds prevent many less aggressive native species from reestablishing a population. Some portions of this community have been landscaped and are typically dominated by Kentucky blue grass, various native and introduced trees, shrubs, and forbs.

3.11.2 Noxious Weeds & Invasive Plant Species

Various forms of development and other ground-disturbing activities typically leave the land vulnerable to invasions by noxious weeds. According to the Utah State Noxious Weed Act, a noxious weed is defined as, "any plant the commissioner determines to be especially injurious to public health, crops, livestock, land, or other property." The State of Utah has published a list of 18 noxious weeds species. Three of the listed species are observed in the study area: field bindweed (Convolvulus arvensis), scotch thistle (Onopordium acanthium), and whitetop (Cardaria draba.).

3.11.3 Wildlife & Fisheries

The disturbed vegetation community generally provides very little habitat for wildlife, although some portions of the community can provide forage areas for small mammals and some birds. How frequently these species occur in the study area depends largely on the level of human influence, land use patterns, and vegetation communities.

Some mammals likely to occur in the study area include mule deer (Odocoileus hemionus), kit and red fox (Vulpes macrotis and V. vulpes), spotted and striped skunk (Spilogale gracilis and Mephitis mephitis), badger (Taxidea taxus), raccoon (Procyon lotor), porcupine (Erethizon dorsatum), black-tailed jackrabbit (Lepus californicus), various mice (Peromyscus spp.), and squirrels (Spermophilus spp.)

Common birds in the study area include black-billed magpie (Pica hudsonia), western meadowlark (Sturnella neglecta), red-winged blackbird (Agelaius phoeniceus), song sparrow (Melospiza melodia), killdeer (Charadrius vociferus), barn swallow (Hirundo rustica), mourning dove (Zenaida macroura), American robin (Turdus migratorius), and American goldfinch (Carduelis tristis). Several raptor species may infrequently use portions of the study area, but no raptors or raptor nests were observed.

Reptiles likely to occur include various species of snake and short-horned lizard (Phrynosoma hernandesi). Amphibians that may occur include bullfrog (Rana catesbeiana), northern leopard frog (Rana pipiens), tiger salamander (Ambystoma tigrinum), and Woodhouse's toad (Bufo woodhousii).

No fisheries are located within the study area.

3.12 CULTURAL RESOURCES

3.12.1 Regulatory Compliance and Cultural Resources

The term "cultural resources" refers to prehistoric or historic archaeological sites or objects and potentially significant historic buildings or structures. Cultural resources are considered part of the environmental and socioeconomic resources that must be considered in the project development planning and decision making process as required by NEPA (NEPA, 42 USC 4321; 40 CFR 1500.1) and as administered and overseen by the Council on Environmental Quality and the EPA. This SES is prepared to be consistent with NEPA requirements as well as other relevant federal and state laws, regulations, standards, and guidelines. For cultural resources, this includes the National Historic Preservation Act (NHPA, 16 USC 470), the Advisory Council on Historic Preservation (ACHP) rules and regulations Protection of Historic Properties (36 CFR part 800), the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, and the National Register of Historic Places (NRHP) guidelines. At the state level, this project falls under the purview of Section 9-8-404 of the Utah Code Annotated for Historic Structures and follows the Utah State Historic Preservation Office (USHPO) Division of State History guidelines "Standard Operating Procedures for Reconnaissance Level Surveys" (September 2005) and "Standard Operating Procedures for Intensive Level Survey" (February 2005). While this project is state funded, it has been agreed that the SES will be consistent with the regulations of both federal and state laws.

NEPA requires consideration of important historic, cultural, and natural aspects of our heritage. Important aspects of our national heritage that are present within the study area will be considered under Section 106 (16 U.S.C. 470f) of the NHPA. This act requires agencies to take into account the effect that an undertaking may have on historic properties. Historic properties are those that are listed in, or eligible for listing in, the NRHP and may include buildings, structures, objects, sites, and/or districts. In accordance with the ACHP regulations for the protection of historic properties (36 CFR 800.4), agencies are required to identify, assess, and mitigate the effects that the undertaking may have on such properties.

The NRHP Criteria for Evaluation is based on the "The National Register of Historic Places National Register Brochure" (2002, U.S. Department of the Interior, National Park Service National Register, History and Education). To be eligible for the National Register, a building must: 1) be at least 50 years old; 2) retain its architectural integrity; and 3) be significant. The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association. Further, a property must be evaluated by its association with an important historic context and retain integrity of those features necessary to convey its significance (National Park Service 1991). This significance can be national, statewide, or local, but must fall in one or more of the following categories:

(a) associated with events that have made a significant contribution to the broad patterns of our history; or
(b) associated with the lives of persons significant in our past; or
(c) embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
(d) has yielded, or may be likely to yield, information important in prehistory or history.

The USHPO Criteria for Evaluation is based on the USHPO Division of State History Guidelines (Standard Operating Procedures for Reconnaissance Level Surveys [February 2005]). To determine eligibility, the USHPO utilizes a resource rating system, which is different from that of the NRHP. It allows four classifications in evaluating historic resources listed as Criteria A, B, C, and D.

A. Eligible. Built within the historic period and retains integrity: excellent example of a style or type; unaltered or only minor alterations or additions; individually eligible for the National Register under NRHP Criterion (c); also buildings of known historical significance. (The resource meets the age requirement and maintains architectural integrity.)
B. Eligible. Built within the historic period and retains integrity; good example of a style or type, but not as well preserved or well executed as "A" buildings; more substantial alterations than "A" buildings, though overall integrity is retained; eligible for the National Register under Criterion (a) as part of a potential historic district or primarily for historical, rather than architectural, reasons (which cannot be determined at this point). (The resource meets the age requirement and has minor exterior modifications.)
C. Ineligible. Built during the historic period but has had major alterations or additions; no longer retains integrity. (The resource meets the age requirement but has extensive exterior modifications.)
D. Out of period. Constructed outside the historic period. (The resource is not of sufficient age.)

Evaluated buildings that meet USHPO Criterion A would be considered eligible for listing in the National Register under NRHP Criterion (c) (embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master). Buildings evaluated and meeting USHPO Criterion B would be considered eligible for listing in the National Register under NRHP Criterion (a) (associated with events that have made a significant contribution to the broad patterns of our history). Buildings evaluated under USHPO Criteria C or D would not be considered as eligible for listing in the National Resister.

3.12.2 Cultural Resource Findings

Two recent cultural resource studies were conducted within the Area of Potential Effect (APE). "A Cultural Resource Inventory of 3500 South, 2700 South to 8400 West, Salt Lake County, Utah" (Christensen, Mullins, and Ellis 2002) examined archaeological resources in

the area and "Selective Reconnaissance Survey – West Valley City and Magna, Salt Lake County, Utah" (Calkins 2004) surveyed historic resources. The APE is 100 feet on each side of the 3500 South centerline within the study area. Following are the results of these two studies within the APE.

3.12.2.1 Archaeological Resources

No archaeological resources were found during the field survey or are known to exist within the APE.

3.12.2.2 Historic Resources

Historic Structures: A reconnaissance level survey was conducted to identify all buildings constructed during the historic period within the APE. The buildings and structures documented in the survey were evaluated with the criteria established by the NRHP and in compliance with the guidelines established by the USHPO (see above).

Canals: The Ridgeland Canal (42SL305) and the North Jordan Canal (42SL342) were identified during the cultural resources inventory (Christensen, Mullins, and Ellis 2002), however the historical canal segments no longer exist within the APE. As such, these segments are recommended not eligible for the NRHP.

3.12.2.3 Native American Consultation

Native American consultation has been conducted in connection for the previous 3500 South corridor study DEIS. Although four Native American tribes were invited to comment on the 3500 South corridor study, no comments were received.

3.12.3 Eligible Historic Properties

Three historic properties were identified within the current APE. They are listed in **Table 3-18** and described below. UDOT consultation with the USHPO resulted in concurrence with the determination of eligibility for these three historic properties (March 29, 2004 Dykmann [USHPO] and June 3, 2004 Murphy [USHPO] to Skinner [UDOT]) (see **Appendix A**). **Figure 3-7** shows these properties.

Table 3-18: Summary of Eligible Historic Properties

Map ID No. - Address	Description	Year Built	USHPO/NRHP eligibility criteria
1 - 2878 West 3500 South	Post War Modern	1955	A/(c)
2 - 3525 South 2200 West	Minimal Traditional	1940	B/(a)
3 - 1920 West 3500 South	Other/Unclear Style	1938	B/(a)
Source: Selective Reconnaissance Survey, Calkin 2004			

1 – 2878 West 3500 South

This post-war modern style structure was constructed in 1955 as a commercial building, and retains original concrete block, rendering a USHPO Criterion of A (meets the age requirement and maintains architectural integrity) and NRHP eligibility under Criterion (c) for the architectural character (Calkins 2004). There are no other contributing historic features to the property.

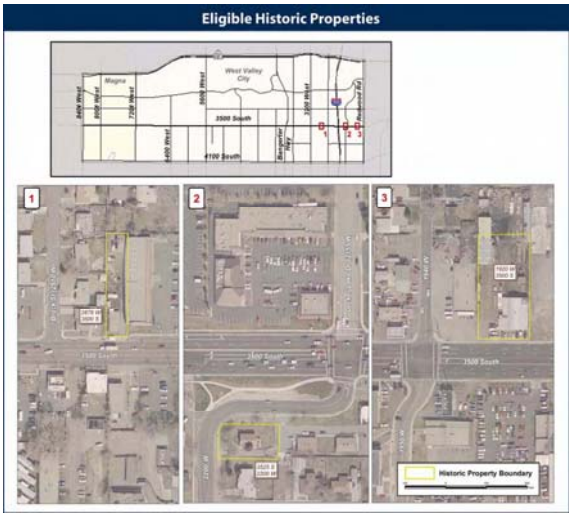
2 – 3525 South 2200 West

This minimal traditional style structure was constructed in 1940 during the later Transportation Connections Period (1917-1941) (Calkins 2004), an important town development phase of the Hunter-Granger area. It has undergone exterior modifications, rendering a USHPO Criterion of B (meets the age requirement and has minor exterior modifications) and NRHP eligibility under Criterion (a) for its contribution to the historic setting and context of the community. There are no contributing historic features to the property.

3 – 1920 West 3500 South

This concrete block structure of unclear architectural style was constructed in 1938 during the Transportation Connections Period (1917-1941) (Calkins 2004), an important town development phase of the Hunter-Granger area. It has exterior modifications, rendering a USHPO Criterion of B (meets the age requirement and has minor exterior modifications) and NRHP eligibility under Criterion (a) for its contribution to the historic setting and context of the community. There are no other contributing historic features to the property.

Figure 3-7: Eligible Historic Properties



3.13 HAZARDOUS WASTE

3.13.1 Regulatory Setting

Hazardous wastes and materials are defined as products or wastes regulated by the UDEQ or the EPA. These include substances regulated under the following acts:

- Comprehensive Emergency Response, Compensation, and Liability Act (CERCLA)
- Resource Conservation and Recovery Act (RCRA)
- Toxic Substances Control Act (TSCA)
- The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

The discovery of hazardous waste within the study area can potentially affect the cost, schedule, and agency/public involvement of the project. In order to identify potential hazardous waste locations, hazardous waste assessments are conducted prior to right-of-way acquisition and the commencement of construction activities. For the SES, this work included an environmental hazards assessment of the affected environment, an assessment of the potential impacts that the build alternatives may have on that environment, and mitigation measures that may be taken to reduce those impacts. This chapter documents methods and results of the hazardous waste assessment.

3.13.2 Methods

A modified Phase I Environmental Site Assessment (ESA) was conducted for the 3500 South study area. The purpose of the ESA was to identify sites within the study area that are contaminated or potentially contaminated with hazardous materials or waste. Sites containing solid waste were also identified. The search area for the hazardous waste research was defined as a 200-foot distance on both the north and south sides from the centerline of 3500 South.

Data collection included a review of numerous government agency databases, a review of current aerial photographs, and a field reconnaissance of the study corridor. Standard Federal and State databases have been researched to identify known hazards to the environment within the study area and to assess whether adjacent sites have recognized hazards. Research was conducted using the approximate minimum search distances established in the *Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process* ASTM E 1527-00. The documents or databases reviewed include the following:

- Federal National Priorities List (NPL);
- Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) List;
- Federal Corrective Action Site List (CORRACTS);

- Federal Resource Conservation and Recovery Act Information (RCRAInfo) database for sites that generate, transport, store, treat and/or dispose of hazardous waste as defined by RCRA;
- Federal Emergency Response Notification System (ERNS) List; and
- State of Utah Solid Waste Facilities/Landfill Sites (SWF/LF);
- State of Utah Underground Storage Tank (UST) List;
- State of Utah Leaking Underground Storage Tank (LUST) List;
- State of Utah Aboveground Storage Tank (AST) List;
- State of Utah Leaking Aboveground Storage Tank (LAST) List;
- State of Utah Spills Data (SPILLS) List;
- State of Utah Registered Drycleaners (DRYCLEANERS) List.
- State of Utah Voluntary Cleanup Sites (VCP) List; and
- Facility Index System/Facility Registry System (FINDS).

The following paragraphs discuss each of these databases in turn. In addition to database search, the ESA included site reconnaissance of the study area on January 13, 2006.

3.13.3 Results

The USEPA NPL of uncontrolled or abandoned hazardous waste sites was reviewed for sites within the search area. To appear on the NPL, sites must meet or exceed a predetermined Hazard Ranking System score, be selected as a state's top priority site, pose a significant health or environmental threat or be a site where the USEPA has determined that remedial action is more cost-effective than removal action. Review of the October 2005 NPL database identified no NPL sites within the study area.

The USEPA CERCLIS database identifies hazardous waste sites that require investigation and possible remedial action to mitigate potential impacts on human health or the environment. Review of the September 2005 database identified no CERCLIS sites within the study area.

As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. Review of the September 2005 database identified no NFRAP sites within the study area.

The USEPA's CORRACTS identifies and tracks RCRA facilities which are undergoing corrective actions. A corrective action order is issued pursuant to RCRA Section 3008(h) when there has been a release of a hazardous waste or constituents into the environment from a RCRA facility. Corrective actions may be required beyond the facility's boundary and can be required regardless of when the release occurred, even if it predates RCRA. Review of the October 2005 CORRACTS database identified no CORRACTS sites within the study area.

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the RCRA of 1976 and the Hazardous and Solid Waste Amendments of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System. The database provides information on sites that generate, transport, store, treat and/or dispose of hazardous waste as defined by RCRA. The database is composed of several different lists based on activity (i.e. generator, transporter, treat/store/dispose) and quantity.

Review of the October 2005 RCRAInfo list for RCRA treatment, storage, or disposal (TSD) sites identified no RCRA-TSD sites within the study area.

Review of the October 2005 RCRAInfo list for RCRA large quantity generators (LQG) (generators of at least 1,000 kilograms per month (kg/month) of non-acutely hazardous waste or 1 kg/month of acutely hazardous waste) identified no RCRA-LQG sites within the study area.

Review of the October 2005 RCRAInfo list for RCRA small quantity generators (SQG) (generators of 100 kg/month but less than 1,000 kg/month of non-acutely hazardous waste) identified ten (10) generators of hazardous waste located within the study area. **Table 3-19** summarizes the identified small quantity RCRA generators. None of the generators had any violations reported, with the exception of Advanced Body and Paint, which had an oversight violation in March of 1986 but achieved compliance in the same month.

Table 3-19: RCRA Small Quantity Generators

Facility Name	Address
Oil Stop *(formerly Tunex International, Inc.)*	3406 South Redwood Road
The Pep Boys	2040 West 3500 South
Vacant Building *(formerly David Early Tires)*	2850 West 3500 South
Family Cleaners	2816 West 3500 South
Alan's Automotive	3253 West 3500 South
Minit-Lube #1002	3796 West 3500 South
Red Hanger Number 7	3336 West 3500 South
Advanced Body and Paint	2015 West 3500 South
Utah Auto *(formerly TuneUp Masters #654)*	1945 West 3500 South
D&M Tire DBA ZCMI Auto Center	3601 South 2700 West

In addition to the RCRA Generators listed above, the site reconnaissance identified ten (10) additional potential RCRA generators within the study area. **Table 3-20** summarizes potential RCRA generators.

Table 3-20: Potential RCRA Generators

Facility Name	Address
T & G Automotive	1999 West 3500 South
Sneds Automotive Inc.	2025 West 3500 South
Meineke Discount Mufflers	2190 West 3500 South
Firestone Car Service Station	2700 West 3500 South
Big O Tires Service Station	2830 West 3500 South
Midas Auto Service Experts	2851 West 3500 South
Auto Rage	2883 West 3500 South
Goodyear Tire & Service	2945 West 3500 South
Affordable Transmissions	3310 West 3500 South
American Engine X-Change	3385 West 3500 South

ERNS is a national database used to collect information on reported releases of oil and hazardous substances. The database contains information from spill reports made to federal authorities including the USEPA, the U.S. Coast Guard, the National Response Center, and the Department of Transportation. Review of the December 2004 ERNS database identified no ERNS sites within the study area.

The State of Utah SWF/LF database contains an inventory of solid waste disposal facilities or landfills in the state. Review of the May 2005 SWF/LF database did not identify any of these sites within the study area.

Review of the October 2005 UDEQ Division of Environmental Response and Remediation (DERR) UST list identified twenty-one (21) UST sites within the study area. **Table 3-21**: summarizes the identified UST sites.

Sixteen (16) of the twenty-one (21) UST sites identified have closed all of their tanks in accordance with Utah State Regulations. Closure entails either removing the tank or filling it with sand or cement and sampling the surrounding environment. It appears that these

closed UST sites no longer pose a recognized environmental concern at this time; however, there could be contaminated soils at these sites that would need to be disposed of properly.

The remaining five (5) UST sites with open tanks are located within the search area. The condition of these tanks, and the existence of contamination associated with these tanks, is not known at this time. It is the opinion of the study team that the possibility of encountering contamination during excavation activities in these areas is moderate and could pose a recognized environmental condition in the future.

Table 3-21: UST Sites Identified

Facility Name	Address	Current Status of Tanks
Oil Rig, Inc.	3480 South Redwood Road	Closed
Unidentified Business *(Appears to be the Treasure Antique Mall)*	1940 West 3470 South	Closed
West Valley Auto Repair	1940 West 3461 South	Closed
Sned's (Broadhead Automotive)	2025 West 3500 South	Closed
Maverick #335 *(no longer in business)*	3491 South Redwood Road	Closed
7-Eleven 1851-23926	3510 South Redwood Road	Three Operating Two Closed
Beehive Stores (Sinclair) *(formerly Holiday Oil #5)*	1950 West 3500 South	Two Operating Three Closed
Chevron #72944 *(no longer in business)*	2700 West 3590 South	Closed
Firestone Store #48F9	2700 West 3601 South	Closed
Former Georgia Carpet Outlet	2772 West 3500 South	Closed
Alan's Automotive Service *(formerly Fast Eddies)*	3257 West 3500 South	Closed
Chevron *(formerly Holiday Oil #28)*	3189 West 3500 South	Two Operating Three Closed
Emissions Express *(formerly Gas-N-Go)*	3190 West 3500 South	Closed
Holiday Oil #17	3210 West 3500 South	Three Operating Five Closed
Granger-Hunter Improvement District	3146 West 3500 South	Closed
AC Delco *(formerly Auto Care Clinic)*	3105 West 3500 South	Closed
Big O Tire Service Center *(formerly Freedom Tire & Service)*	2830 West 3500 South	Closed
David Early #8	2850 West 3500 South	Closed

Facility Name	Address	Current Status of Tanks
Jiffy Lube *(formerly Q-Lube #1002)*	3796 West 3500 South	Closed
Premium Oil Co. *(formerly Phillips 66 #35)*	3575 West 3500 South	Four Operating
7-Eleven 1851-29512 *(no longer in business)*	3634 West 3500 South	Closed

Note: 'Closed' indicates that the tanks have been either removed or filled, in accordance with Utah State Regulations.

Review of the October 2005 UDEQ, DERR, LUST site list identified twenty (20) LUST sites within the study area. **Table 3-22** summarizes the identified LUST sites and their current status with the UDEQ.

Eighteen (18) of the twenty (20) LUST sites identified have been closed in accordance with Utah State Regulations and no further remedial action is required. It appears that these closed LUST sites no longer pose a recognized environmental condition; however, there could be contaminated soils at these sites that, if disturbed, would need to be disposed of properly.

It is the opinion of the study team that the remaining two (2) open LUST sites are actively being monitored, remedied, and/or assessed by the DERR at this time and pose a recognized environmental threat. Records maintained at the DERR should be reviewed in order to determine the type and extent of contamination associated with these open LUST sites.

Table 3-22: LUST Sites Located Within the Search Area

Facility Name	Address	Current Status
Broadhead Automotive	2025 West 3500 South	Closed 9/92
Maverick #335 *(no longer in business)*	3491 So. Redwood Road	Closed 7/02
7-Eleven 1851-23926	3510 So. Redwood Road	Closed 7/04
West Valley Auto Repair	1940 West 3461 South	Closed 8/99
Beehive Stores (Sinclair) *(formerly Holiday Oil #5)*	1950 West 3500 South	Closed 7/90 and 7/02
Firestone Store #48F9	2700 West 3601 South	Closed 11/96
Chevron #72944	2700 West 3590 South	Closed 3/98
Alan's Automotive Service *(formerly Fast Eddies)*	3257 West 3500 South	Open
Chevron *(formerly Holiday Oil #28)*	3189 West 3500 South	Closed 8/00
Emissions Express *(formerly Gas-N-Go)*	3190 West 3500 South	Closed 3/96
Holiday Oil #17	3210 West 3500 South	Closed 8/95
Granger-Hunter Improvement District	3146 West 3500 South	Closed 6/95
AC Delco *(formerly Auto Care Clinic)*	3105 West 3500 South	Closed 7/94
Rainbo #7 *(no longer in business)*	3991 West 3500 South	Closed 5/96
Former Georgia Carpet Outlet	2772 West 3500 South	Closed 9/98
Big O Tire Center *(formerly Freedom Tire & Service)*	2830 West 3500 South	Closed 3/95
Kelly Moore Paints	3040 West 3500 South	Closed 2/05
Premium Oil Co. *(formerly Phillips 66 #35)*	3575 West 3500 South	Open
Jiffy Lube *(formerly Q-Lube #1002)*	3796 West 3500 South	Closed 12/95
7-Eleven 1851-29512	3634 West 3500 South	Closed 5/97 and 8/04

Note: A site can be both a UST and LUST site. Most of the time a LUST site will be a closed UST site

The State of Utah AST database contains an inventory of permitted aboveground storage tanks in the state. Review of the September 2005 AST database did not identify any AST sites within the study area.

The State of Utah LAST database contains an inventory of leaking aboveground storage tank locations that have been identified in the state. Review of the September 2005 LAST database did not identify any LAST sites within the study area.

The State of Utah SPILLS database contains spill data and records incidents reported to the Division of Environmental Response and Remediation. Review of the November 2005 database identified four (4) SPILLS sites within the study area. **Table 3-23** summarizes the identified SPILLS sites and provides information on the reported spill. These SPILL sites are no longer considered to pose a recognized environmental condition.

Table 3-23: SPILLS Sites Location within the Search Area

Address	Date Reported	Spill Information
1700 West 3500 South	September 2003	30,000 gallons of anhydrous ammonia
3576 West 3500 South	October 2003	Gasoline fumes reported coming from nearby storm drain
3600 West 3500 South	October 2001	Petroleum spill into a storm drain
3634 West 3500 South	March 1995	10-15 gallons of gasoline into a storm drain

The State of Utah DRYCLEANERS list provides a listing of registered drycleaners. This can be important because drycleaning establishments use hazardous chemicals. Review of the March 2005 DRYCLEANERS list identified four (4) sites within the study area. **Table 3-24** summarizes the identified DRYCLEANERS sites. Inclusion in this database alone is not considered to pose a recognized environmental condition. Therefore, because these sites are not included in any of the databases that indicate associated environmental contamination, they are not considered to pose a recognized environmental condition at this time.

Table 3-24: DRYCLEANERS Sites Located within the Search Area

Facility Name	Address
Quality Dry Cleaning	2802 West 3500 South
Family Dry Cleaning	2816 West 3500 South
Red Hanger Cleaners	3336 West 3500 South
Cleaning Concern Self Service	3520 West 3500 South

The State of Utah VCP database contains an inventory of sites that are undergoing cleanup as part of the State of Utah's Voluntary Cleanup Program. Review of the September 2005 VCP database did not identify any VCP sites within the study area.

The FINDS contains facility information and directs users to other sources that contain more detail. These include: Permit Compliance System; Aerometric Information Retrieval System; FIFRA and TSCA Enforcement System. Review of the September 2005 FINDS

database identified thirty-four (34) FINDS sites within the study area. A review of these sites indicated that twenty (20) of the sites were also identified in other databases searched for this report and are, therefore, included in other sections of this report. The remaining twelve (12) sites are summarized in **Table 3-25**. These sites are not considered to pose a recognized environmental condition.

Table 3-25: FINDS Locations

Facility Name	Address
Country Carpets	1980 West 3500 South
Bradley Peterson	2196 W 3500 South, Ste. C-3
Todd G. Singleton	2727 West 3500 South
Aspen Village Apartments	3043 West 3500 South
AAA Dental Corporation	3280 West 3500 South, Ste. 2
John R. Gassman DDS	3280 West 3500 South, Ste. 4
Kenneth P. Anderson	3280 West 3500 South, Ste. 1
A Gentle Vet, Inc.	3337 West 3500 South
Able Chiropractic	3378 West 3500 South
Checker Auto Store # 1307	3408 West 3500 South
Auto Parts Unlimited	3495 West 3500 South
Shag Rug La	3730 West 3500 South

3.14 VISUAL QUALITY

Since transportation improvements may affect visual resources such as vegetation and other landscape features, historic buildings and sites, and parks and open spaces, they must be adequately assessed during project development. Assessing the visual character along 3500 South between Bangerter Highway and Redwood Road involved site visits and a review of aerial photographs, design plan sheets, and topographic maps.

The topography for the entire study area is low relief. To describe the study area's visual character, this assessment divides the corridor into western, central, and eastern sections.

The western end of the study area between Bangerter Highway and Constitution Blvd. has often been characterized as part of the "downtown" of West Valley City. This area includes primarily commercial properties, signage, and little landscaping. Older commercial buildings, typically low profile one- or two-story structures, are built close to the street with parking usually located alongside the building. Newer, larger commercial buildings are setback from the street with parking in front. Landscaping in most areas is minimal or non-existent. Many business signs are located along this portion of the corridor. One historic commercial property is located in this portion of the study corridor at 2878 West (see **Section 3.12**).

Views to the north and south are limited to foreground views by immediate roadside land uses. The Oquirrh Mountains can be viewed from the corridor and are seen in the far west backdrop. The Wasatch Front, mountain range east of the corridor, is less visible from this western segment due to the elevated crossing of I-215. As one approaches the I-215 interchange from either the east or the west along 3500 South, the background mountains become increasingly obscured from vision by the elevated interstate.

The central section of the study area extends from Constitution Blvd to Decker Lake Drive and includes the I-215 interchange. The interchange is grade separated with I-215 passing over 3500 South at approximately 2300 West. Buildings in this part of the study area are surrounded by large parking lots separated from the roadway with wide berms and unmaintained open spaces with little landscaping. The functional aspects of these buildings and activities are internally focused and have no relationship with the street character. Their separation from 3500 South is important, however, in reducing the number of conflicts in this area as people merge onto and off of the interstate. Overall, the presence of the I-215 interchange with 3500 South disrupts the visual and physical continuity along the corridor. Adjacent commercial buildings, a residential area, and an apartment building, are potential sensitive receptors in this section of the study area.

The eastern end of the study area includes the area between Decker Lake Drive and Redwood Road and is on the east side of I-215. Here, views to the west of the Oquirrh Mountains are largely obscured by I-215. Eastern views are of roadside development with

the Wasatch Mountains visible in the distance. The eastern area is also characterized by commercial properties. The visual character of this area is unique to the corridor because it includes a portion of the city's "International District." This area is defined by its many ethnic businesses, proximity to proposed cultural facilities (Jordan River Multi-Cultural Center), and its proximity to ethnically mixed neighborhoods. Although this diversity creates a sense of place, limited visual cues and the lack of a defined entry or sense of arrival detract from this characteristic. The buildings are a mix of remnant industrial and older, mid-size commercial uses and structures surrounded by parking. One historic commercial property is located in this section of the study area at 1920 West (see **Table 3-18: Eligible Historic Properties**). The buildings are a mix of remnant industrial, and older, mid-size commercial structures surrounded by parking. Buildings are closer to the street in this section than in other areas of the study area; however, some parking lots are located next to the street. Overhead power lines run along the south side of 3500 South with some crossing to the north. An array of older, smaller business signs line the roadside. Commercial buildings, a place of worship, and a historically eligible property are potential sensitive receptors in this section of the study area.